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April 17, 1991

Meeting Minutes Transmittal/Approval
Unit Managers Meeting: 100 Aggregate Area Operable Units
450 Hills Street, Room 47
Richland, Washington

Meeting Held March 21, 1991

From/
Appvl.: Robert K. Stewart for Date: 4/23/91
James D. Goodenough, 100-HR-1/DR-1/BC-1/KR-1 Unit Manager, DOE-RL (A5-19)

Appvl.: David S. Shafer Date: 4/23/91
David S. Shafer, 100-HR-3/BC-5/NR-1/KR-4 Unit Manager, DOE-RL (A5-19)

Appvl.: Paul M. Pak Date: 4/22/91
Paul M. Pak, 100-NR-3 Unit Manager, DOE-RL (A5-19)

Appvl.: [signature] Date: 4/17/91
Larry Goldstein, 100-HR-1/BC-1/BC-5/NR-1/KR-1 Unit Manager, WA Department of Ecology

Appvl.: Charles S. Cline Date: 4/17/91
Charles S. Cline, 100-HR-3/DR-1/NR-3/KR-4 Unit Manager, WA Department of Ecology

Appvl.: David R. Einan for Date: 17 Apr 91
Douglas R. Sherwood, 100-HR-1/HR-3/DR-1/BC-1/BC-5 Unit Manager, EPA (B5-01)

Appvl.: David R. Einan Date: 17 Apr 91
David R. Einan, 100-KR-1/100-KR-4 Unit Manager, EPA (B5-01)

Meeting Minutes are attached. Minutes are comprised of the following:

Attachment #1 - Meeting Summary/Summary of Commitments and Agreements
Attachment #2 - Attendance List
Attachment #3 - Commitments/Agreements Status List
Attachment #4 - Use of Tracer Studies During 100-NR-1 Investigation
Attachment #5 - 100-HR-1/HR-3/DR-1 Schedule

100 Aggregate Area Operable Units Managers Meeting
March 21, 1991

Prepared by: _____ Date: 4/17/91
Bill Fryer, SWEC Support Services

Concurrence by: _____ Date: 4/18/91
WHC HR-1 RI Coordinator

Concurrence by: _____ Date: 4/17/91
WHC HR-3 RI Coordinator

Concurrence by: _____ Date: 4/17/91
WHC DR-1 RI Coordinator

Concurrence by: _____ Date: 4/17/91
WHC BC-1 RI Coordinator

Concurrence by: _____ Date: 4/17/91
WHC BC-5 RI Coordinator

Concurrence by: _____ Date: 4/17/91
WHC NR-1 RI Coordinator

Concurrence by: _____ Date: 4/17/91
WHC NR-3 RI Coordinator

Concurrence by: _____ Date: 4/17/91
WHC KR-1 RI Coordinator

Concurrence by: _____ Date: 4/17/91
WHC KR-4 RI Coordinator

100 Aggregate Area Operable Units Managers Meeting
March 21, 1991

Distribution:

Pamela Innis, EPA (B5-01)
Donna Lacombe, PRC
Ward Staubitz, USGS
Diane Clark, DOE (A5-55)
Doug Fassett, SWEC (A4-35)
Mary Harmon, DOE-HQ (EM-442)
KaeRae Parnell, WHC (H4-18)
Tom Wintczak, WHC (B2-15)
Mel Adams, WHC (H4-55)
Merl Lauterbach, WHC (H4-55)
Linda Powers, WHC (B2-35)

Ronald D. Izatt (A6-95)
Director, DOE-RL, ERD
Ronald E. Gerton (A6-80)
Director, DOE-RL
Roger D. Freeberg (A6-95)
Chief, Rstr. Br., DOE-RL/ERD
Steven H. Wisness
Tri-Party Agreement, Prog. Mgr.
Richard D. Wojtasek (B2-15)
Prgm. Mgr. WHC

ADMINISTRATIVE RECORD: 100-HR-1, 100-HR-3, 100-DR-1, 100-BC-1, 100-BC-5, 100-KR-1, 100-KR-4, 100-NR-1, 100-NR-3; Care of Susan Wray, WHC (H4-51C)

Please inform Doug Fassett (SWEC) of deletions or additions to the distribution list.

Attachment #1

Meeting Summary and Summary of Commitments and Agreements
100 Aggregate Area Operable Unit Managers Meeting
March 21, 1991

100-BC-1,5

1. A report was given by Merle Lauterbach (WHC). The work plans are done, but they lack schedules.

100-BC-2

2. A report was given by Merle Lauterbach (WHC). The first draft of the work plan is written and has been given to WHC. The plan should be given to DOE-RL in 60 days.

100-KR-1,4

3. A report was given by Merle Lauterbach (WHC). The work plans have been given to DOE-RL. When the next versions of the 100-KR work plans are submitted to the regulators, an operable unit by operable unit schedule will also be submitted. Jim Goodenough (DOE-RL) said this schedule will allow allocation of resources.

100-NR-1,3

4. A report was given by Merle Lauterbach (WHC). The comments from the regulators on the work plans have been submitted to WHC, and an extension of 60 additional days is being requested for dispositioning. Over 250 pages of comments were received from Ecology, particularly concerning vadose zone monitoring in the source areas.

Action Item 1NR.4: Set up comment resolution meetings with the regulators. A A meeting on 100-NR-1 is tentatively scheduled for 4/30/91 and on 100-NR-3 a meeting is tentatively scheduled for 5/1/91. Action: Bill Green (WHC) (3/21/91)

5. Bill Green (WHC) gave a short presentation on the proposed use of tracer tests in the 100-NR-1 investigation (see Attachment #4). This activity was added in response to a DOE-RL comment. Water table contours have changed over the last several years in response to dissipating mounds, but it is suspected that something else is going on.

General

6. Merle Lauterbach said that WHC is still waiting for a response from Ecology on the work plan submittals. Comments on the investigation of source operable units are still worthwhile because these will not be affected by the Aggregate Area Management Strategy (AAMS) for groundwater investigation. Doug Sherwood (EPA) mentioned that WHC and DOE-RL will get a letter next week on alternate ways of implementing the AAMS. He also stated that the AAMS must be shown to be better, ie. get to the ROD earlier. Merle stated that all non-intrusive work will be

started without approval of the work plans. Doug Sherwood said that WHC should continue with the non-intrusive work. Groundwater strategies will be looked at this summer and one schedule will be developed that will include all the 100 Area operable units.

7. Merle Lauterbach said that funds are set aside for development of a Risk Assessment methodology, and he would like an EPA and an Ecology representative identified.

100-HR Aggregate Area

8. The progress schedule was presented (see Attachment #4).

100-HR-1

9. A report was made by Jeff Ayres (WHC) on the 100-HR-1 operable unit. The pipeline assessment work is still awaiting the final safety documentation. The septic tank work has been approved and the tank will be opened the week of March 25 to look for problems and to sample. The initial field work for the GPR survey will start in 1-2 weeks.

100-DR-1

10. A report was made by Alan Krug (WHC) on the 100-DR-1 operable unit. The topographic base map was completed by Kaiser (KEH). It will take 2-3 months for WHC to add man-made features and labels.

100-HR-3

11. A report was made by Alan Krug on the 100-HR-3 operable unit. The data compilation report is in draft form and it will be out in 1 month.

Hanford Reach Surveillance

12. The Army Corp of Engineers permit for work in the floodplain went to DOE, but it is being held by DOE for additional NEPA documentation.

13. Paul Pak (DOE-RL) announced that there would be a meeting on 3/22/91 to discuss NEPA documentation for the 100 Aggregate Area.

Attachment #2

Attendance List

100 Aggregate Area Operable Units Managers Meeting
March 21, 1991

Name	Organization\Responsibility		Phone
Goodenough, James	DOE	Unit Manager	509-376-7087
Pak, Paul	DOE	Unit Manager	509-376-4798
Shafer, David S.	DOE	Unit Manager	509-376-7167
Johnson, Ken	Ebasco	200-UP-2	206-451-4618
Rosenfeld, Mike	Ebasco	200-UP-2	206-451-4654
Wright, Cara	Ebasco	200-UP-2	206-451-4233
Cline, Chuck	Ecology	U.M. Hydrogeo.	206-438-7556
Richard Hibbard	Ecology	CERCLA Unit	206-493-9367
Einan, Dave	EPA	KR-1, 4 Unit Mgr.	509-376-3883
Innis, Pamela	EPA	Unit Manager	509-376-4919
Sherwood, Doug	EPA	Unit Manager	509-376-5929
Patmont, Clay	H-C	200-UP-2	206-324-9530
Lacombe, Donna	PRC	EPA Contractor	206-624-2692
Fassett, Doug	SWEC	GSSC	509-376-5011
Fryer, Bill	SWEC	GSSC	509-376-9707
Ayres, Jeff	WHC	100-HR-1	509-376-3918
Day, R. E.	WHC	HR-1	509-376-7602
Green, Bill	WHC	100-NR-1, 3	509-376-3886
Krug, Alan	WHC	HR-3 Coord.	509-376-5634
Lauterbach, Merle	WHC	Env. Eng.	509-376-5257
Wittreich, Curt	WHC	200-UP-2	509-376-1862
Drost, Brian	USGS	EPA Support	206-593-6510

Attachment #3

Commitments/Agreements Status List

100-HR-1/HR-3/DR-1 Operable Unit
March 21, 1991

Item No.	Action	Status
1BC.1	A presentation on the Environmental Restoration Document is planned for the next meeting. Action: Jim Patterson	Open (9/20/90)
1HR1.25	The HR and DR work plans will be reviewed by the regulators for incorporation of their comments. Public review is on hold pending DOE-RL review of cost estimates. DOE will provide a schedule for the cost estimates by the next operable unit manager meeting. Action: Jim Goodenough (10/17/90, HR1-UMM)	Open
1HR1.26	Provide a schedule to Ecology for the completion of the HR-1, HR-3 and DR-1 work plans. Action: Mike Thompson, Jim Goodenough (10/16/90, GT.UMM)	Open
1HR3.27	Determine the next critical date for completing the HR-3 work plan. Action: Bob Stewart (10/16/90, GT.UMM)	Open
1HR1.28	Determine when the topographic mapping will be available on HEIS, who is responsible for digitizing the mapping, and when it will be available. Action: Alan Krug (11/15/90)	Open
1HR3.29	Provide regulators with information about the situation concerning the cooling-water discharge pipeline/vent pipes on the island opposite D reactor. Action: Jim Goodenough (11/15/90)	Open
1HR1.30	Check previous UMM minutes to identify outstanding action items. Aggregate 100 area UMM minutes will be placed into the file of each 100 area operable unit included in the meeting. Action: Doug Fassett (SWEC) (12/19/90)	Open

1HR1.31	Resolve the question of DSHS agreement on the Process Effluent Pipeline Integrity Assessment/Air Compliance Finding. Action: L. Goldstein (1/15/90)	Open
1HR3.32	Regarding the removal of the vent pipes, WHC will: 1) Determine the need for an ACE permit; 2) obtain a letter from ACE that gives approval to begin work before the need for the permit is determined; and, 3) draft letters on the matter to the Natural Resources Trustees. Action: A. Krug (1/15/90)	Open
1HR1.33	Place Ecology's letter, regarding their nonacceptance of the concurrent review process, in the Administrative Record. Action: A. Krug (1/15/90)	Open
1HR3.34	Obtain concurrence from the regulators on proposed changes in scope to the 100-HR-3 Biotic Sampling Program. Action: A. Krug (WHC) 1/24/91)	Open: A change request will be completed for the change in scope to the 100-HR-3 biotic sampling program.
1NR.3	Provide to Ecology (and EPA if desired) the DOE guidance documents that are needed. Action: P. Pak and K. M. Thompson (2/21/91)	Open

USE OF TRACER STUDIES DURING 100-NR-1 INVESTIGATION

In response to DOE comments, tracer studies are to be added to the 100-NR-1 RFI Work Plan. Tracer studies involve placing a dye or other tracer material in the subsurface and observing the movement of the dye/tracer in the subsurface. The observed movement of the tracer/dye can then be used to identify groundwater flow directions and velocities as well as hydraulic parameters such as hydraulic conductivity, including anisotropy, and dispersivity. The tracers or dyes are chosen on a site-specific basis and are generally conservatively transported so that actual groundwater flow is observed. These tracers or dyes are also selected so as to be easily detected in site ground water and to have minimal environmental impacts. Typical substances used as tracers include salts (chloride ions), radioisotopes, and visual or fluorescent dyes. The actual tracer material used at the 100-N Area should be selected during the final design of the study during the initial phase of the RFI.

There are two basic types of tracer tests: natural gradient and injection tests. Both may provide useful information for characterizing past and present groundwater flow regimes in the 100-N Area. Natural gradient tests involve passively placing the tracer in the subsurface and observing its migration under natural flow conditions. Such tests should be used to verify estimates of groundwater flow directions and velocities that are derived from water-level data obtained during the RFI. As has been discussed in the work plan, the groundwater flow regime is now changing due to termination of discharge to the 1324 and 1325 Cribs, and it will be important to identify groundwater flow directions and velocities eventually established at the site. Hydraulic conductivity values of subsurface materials can also be calculated using observed gradients and travel time. By observing temporal and spatial patterns of tracer migration, the dispersive characteristics of the subsurface materials should also be better identified.

Injection tests involve forcing the dye or tracer into the subsurface under an artificial pressure head and observing its pattern of migration. This type of test should be most helpful in identifying or supporting conclusions regarding vertical and areal migration patterns in and around the crib areas at the site. By observing the three-dimensional pattern of tracer migration, measurements or indications of the anisotropy in hydraulic conductivity of subsurface materials as well as of other subsurface heterogeneities (e.g., preferential flow paths) can be obtained.

The tracer tests, including the detection sampling program, must be designed so as to assure that the tracer experiments will yield useful and valid information. This will first require a careful inventory and evaluation of existing and new wells, particularly in regard to their screen lengths and depths. Such a well inventory and analysis is now planned during the initial phase of the RFI.

Tracer Tests

1. placing a dye or other tracer material in the subsurface

2. observing the movement

100-NR-1: Groundwater Investigations

Types of Tracers

1. dyes (visual or flourescent)
2. salts (chloride ion)
3. radioisotopes

(chosen on a site specific basis)

100-NR-1: Groundwater Investigations

Types of Tracer Tests

1. Natural Gradient
2. Injection

100-NR-1: Groundwater Investigations

Natural Gradient

1. passive placement of tracer
2. observation

can be used to verify: a) groundwater flow directions

b) velocities

100-NR-1: Groundwater Investigations

Injection

1. forcing tracer into the subsurface
2. observing pattern of migration

can be used to identify:

a) vertical and areal migration patterns

b) anisotrophy

c) preferential flow paths

100-NR-1: Groundwater Investigations

Planning: Phase I RFI

(including detection sampling program)

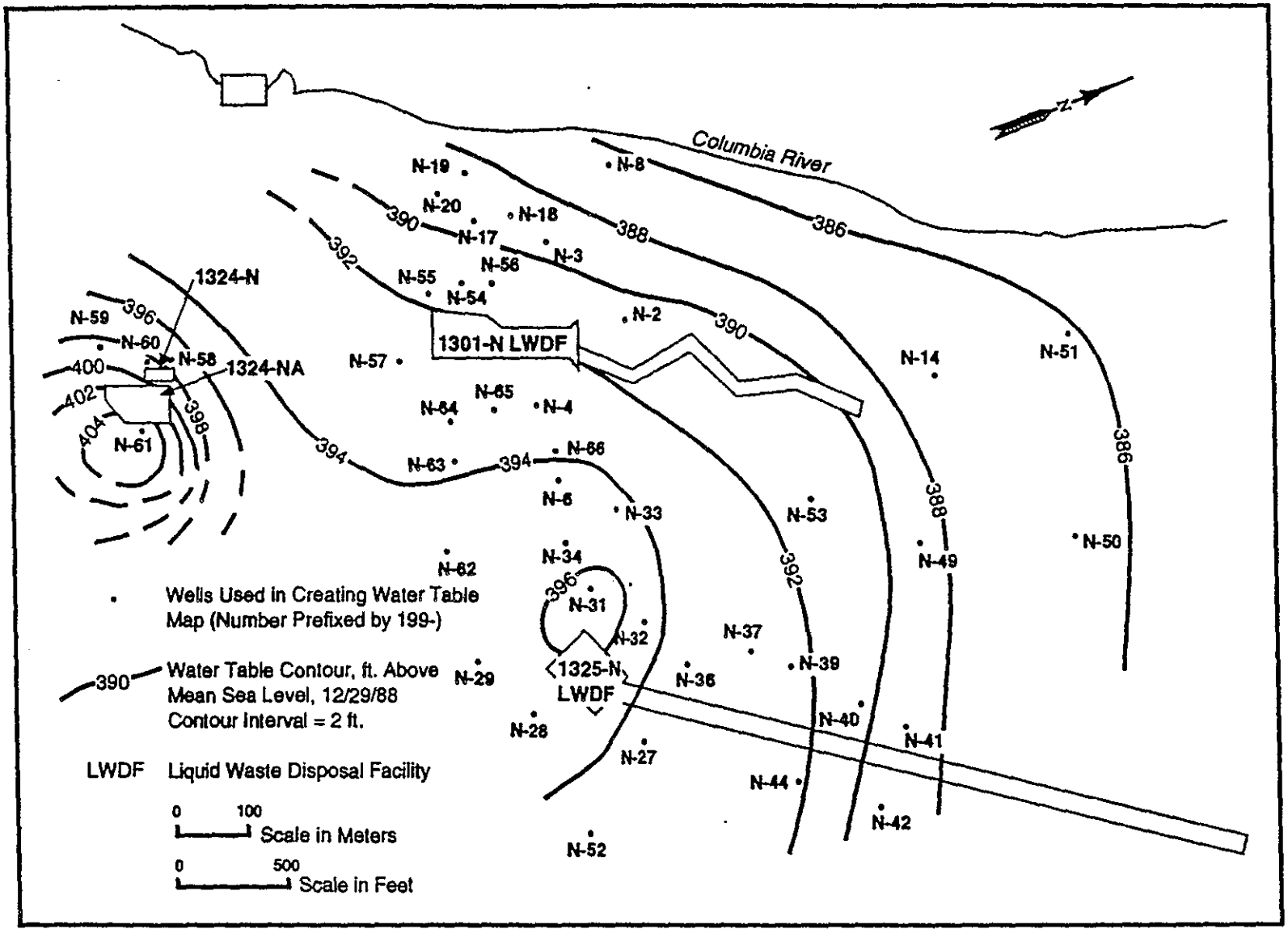
Requirements:

inventory of existing and new wells

a) screen lengths

b) depths

100-NR-1: Groundwater Investigations



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December, 1988

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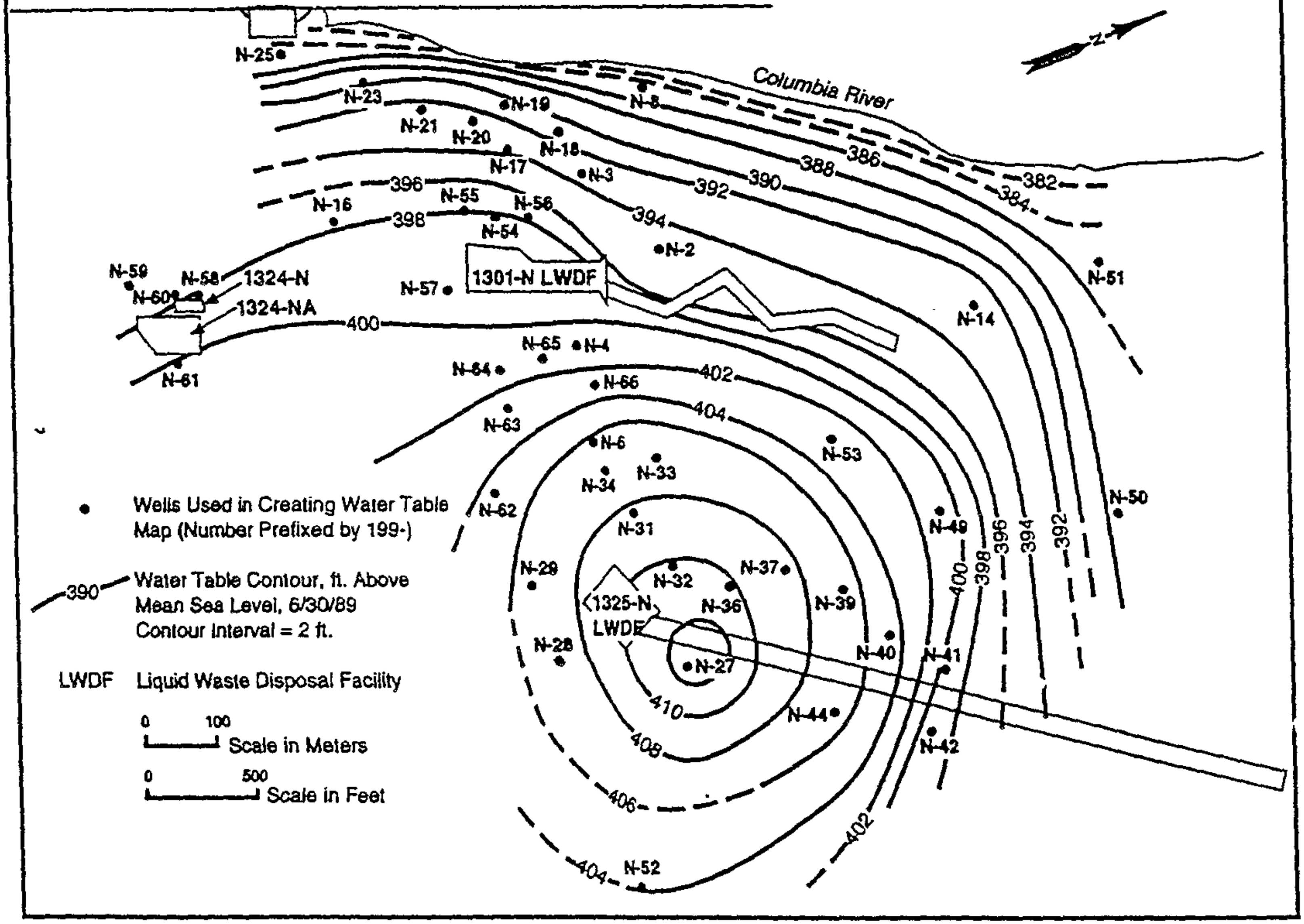
100-NR-1: Groundwater Investigations



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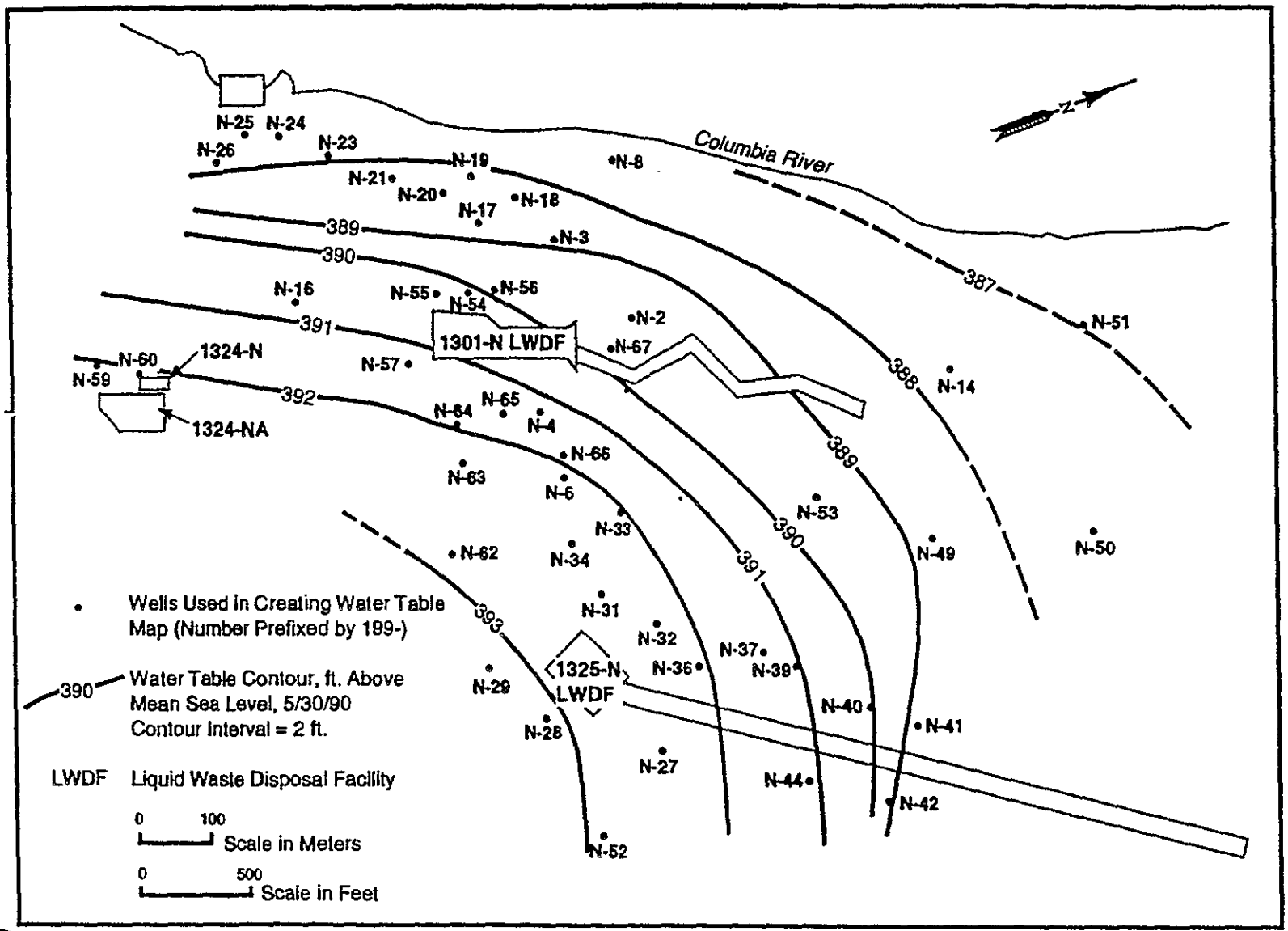
100-NR-1: Groundwater Investigations



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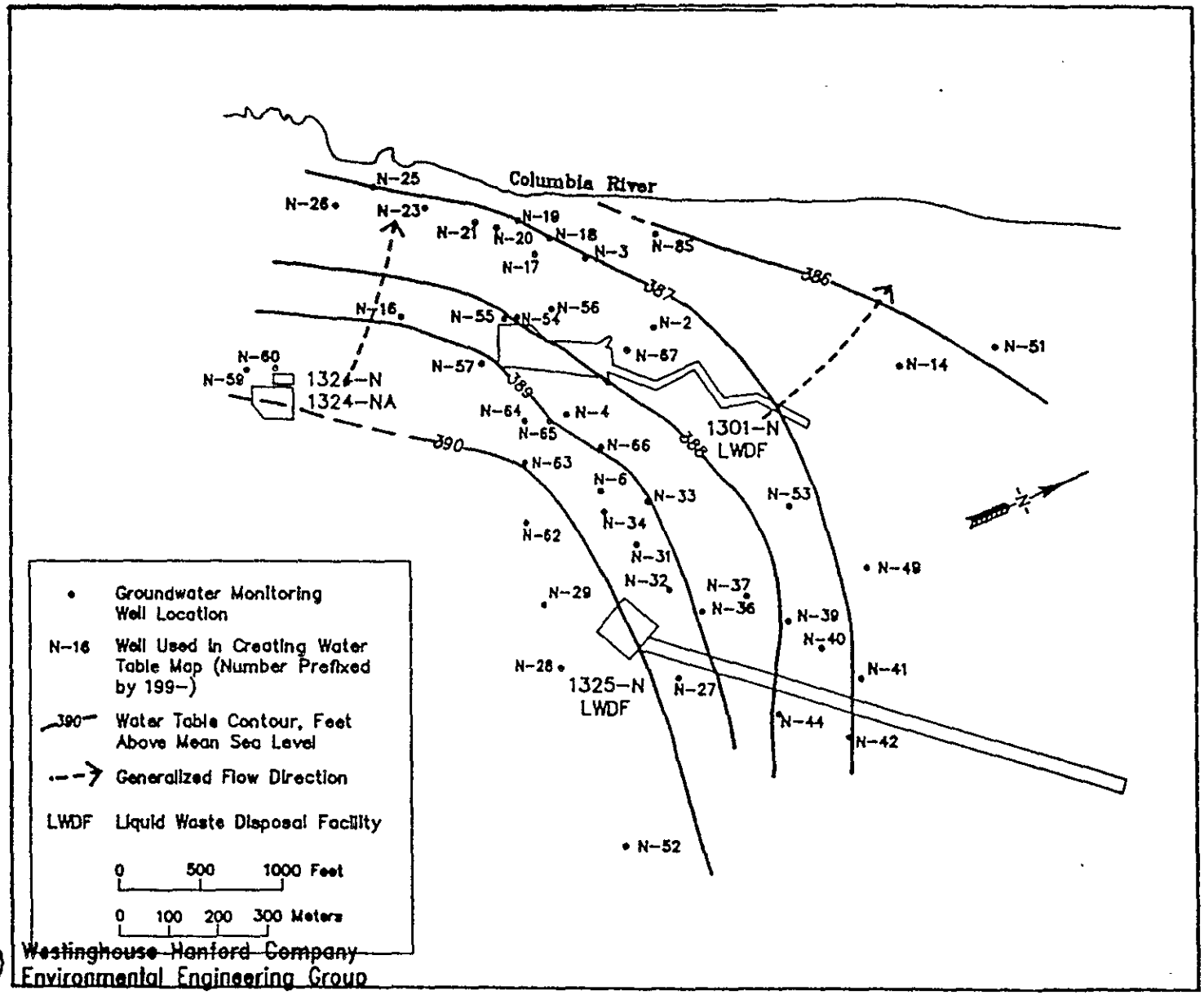
100-NR-1: Groundwater Investigations



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November 29, 1990.

Schedule Name : 100-HR-3 FY91
Responsible :
As-of Date : 21-Mar-91 Schedule File : UNRIVERS

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